

CHEMISTRY >> Gases

Q 1

Molecules of ____ can collide among themselves and exchange energy

A

solids

B

liquids

C

gases

D

both B & C

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Q 2

Why transition metals have strong metallic bonding?

A

Because of high melting point

B

Because d-electrons of outer shell take part in bonding

C

Because s-electrons of outer shell take part in bonding

D

Both s and d electrons takes part in bonding

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Q 3

Which of the following gives Markovnikov's product with Propene?

A

HBr

B

 $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$

C

HBr

D

All of these

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Q 4

The smallest part of crystal lattice showing all the properties of a crystal is called as _____?

A

Crystallite

B

Unit cell

C

Unit crystal

D

Monomer

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Q 5

Which type of bonds are break during cracking?

A

C-C

B

C-H

C

Both C-C and C-H

D

C-O

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Q 6

Which of the following is more soluble in water_____?

A

Ethanol

B

Phenol

C

Hexanol

D

Dimethyl ether

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Q 7

The reactions that release heat are called as _____?

A

Endothermic reactions

B

Exothermic reactions

C

Endergonic reactions

D

Heat gaining reactions

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Q 8

Elements of group 7A are called

A

good loser

B

good gainer

C

energetic

D

stable

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Q 9

Enzymes that catalyze hydrolysis:

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

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Q 10

The slope of the curve obtained by plotting concentration change with time is actually

A

Reaction time

B

Reaction Speed

C

Rate of reaction

D

All of these

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Q 11

When a liquid is heated in a closed container, equilibrium is established between ?

A

Liquid and Solid

B

Liquid and Vapour

C

Liquid solid and vapour

D

Liquid and vapour solid

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Q 12

Addition of second Electron to a uni-negative ion always_____?

A

An endothermic process

B

An exothermic process

C

Neutral process

D

Energy wasted

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Q 13

The compounds having -COOH group are called as_____?

A

Aldehydes

B

Ketones

C

Carboxylic acids

D

Alcohols

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Q 14

a photon of wavelength $1.27 \times 10^{-7} \text{ m}$ is emitted when it jump from higher to $n = 1$, what will be higher orbit

A

 $n = 2$

B

 $n = 3$

C

 $n = 4$

D

 $n = 5$

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Q 15

An atom or group of atom that gives specific properties to the Compound is called as_____?

A

Functional groups

B

Homologous series

C

Alkane

D

Atoms

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Q 16

Order of discharge of ions depends upon

A

Their temperature

B

Their concentration

C

Their Activation Energy

D

All of these

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Q 17

Which of the following remains the same in a period

A

nuclear charge

B

number of electrons

C

shielding effect

D

ionization energy

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Q 18

Crystals of $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ when exposed to air

A

Lose water and remain solid

B

Gain water and remain solid

C

Gain water and become liquid

D

Remains unchanged

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Q 19

The mechanism of reaction can be understood by

A

Experimental details

B

Balanced chemical equation

C

Molar Ratio

D

All of these

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Q 20

Compounds having atoms of more than one kind are called as?

A

Homocyclic compounds

B

Alicyclic Compounds

C

Heterocyclic compounds

D

None of these

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Q 21

Hydrocarbons are organic compounds with element _____

A

Hydrogen

B

Oxygen

C

Carbon

D

Both hydrogen and carbon

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Q 22

The product of active masses of reactant is related to

A

Equilibrium constant

B

rate of reaction

C

Direction of reaction

D

Temperature of reaction

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Q 23

The probability of finding an electron _____ even at large distances from the nucleus

A

becomes one

B

becomes zero

C

never becomes zero

D

varies from 0 to 1

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Q 24

In Metal Hydrides the Oxidation number of Hydrogen is

A

1

B

-1

C

zero

D

2

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Q 25

Equilibrium curve can be drawn by plotting

A

Time and Speed

B

Temperature and Pressure

C

Time & Concentration

D

Pressure & Concentration

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Q 26

The products of S_N1 reactions are formed with_____?

A

Retention in configuration

B

Inversion in Configuration

C

50% retention and 50% inversion in configuration

D

All of these

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Q 27

The condition of a system is called as ____?

A

Reaction conditions

B

Concentration

C

State of system

D

All of these

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Q 28

Dalton's atomic theory couldn't explain the concept about

A

isomers

B

protons

C

isotopes

D

nucleus

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Q 29

How acetic acid is commercially synthesized;

A

from acetylene hydrogenation

B

from oxidation of ethyl alcohol

C

from oxidation of benzaldehyde

D

all of these

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Q 30

Which of the following is the correct IUPAC name of acetone?

A

Propanone

B

3-Propanone

C

2-Butanone

D

2-Propanone

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Q 31

When does it mean, when a reaction is exothermic?

A

Energy content of product is more

B

Energy content of reactant is less

C

Heat is transferred from the system to surrounding

D

Heat is transferred from the Surrounding to the system

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Q 32

All are aliphatic carboxylic acid except ?

A

Benzoic acid

B

Methanoic acid

C

Ethanoic acid

D

Acetic acid

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Q 33

Planck's constant is defined as the ____ of energy and frequency of a photon.

A

product

B

sum

C

ratio

D

none of these

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Q 34

What is optimum temperature for the process of fermentation?

A

10-15 degrees

B

25-30 degrees

C

25-35 degrees

D

25-40 degrees

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Q 35

25 cm³ of the sample of H₂ gas effuses four times as rapidly as 25 cm³ of an unknown gas what will be the molar mass of unknown gas?

A 16g mol⁻¹

B 32g mol⁻¹

C 72g mol⁻¹

D 48 g mol⁻¹

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Q 36

Which one of the following is correct molecular mass of protein ?

A

9000

B

Less than 10000

C

10000

D

More than 10000

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Q 37

The most abundant elements in earth's crust are

A

B & Al

B

Ca & Mg

C

Si & Al

D

All

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Q 38

Energy in formation of a crystal lattice is

A

Absorbed

B

Released

C

Dependent on Crystal Size

D

None of these

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Q 39

What is the mass of one mole aspartame having formula $C_{14}H_{18}N_2O_5$

A

4g

B

40g

C

50g

D

1g

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Q 40

The size and shape of a crystal depends upon some crystallographic elements which are

A

3

B

4

C

6

D

8

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Q 41

Ethanol react which of the following reagent to form ethyl alcohol?

A

 $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$

B

 NaOH

C

 PCl_3

D

All of these

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Q 42

Melting and boiling point of liquids depend upon ____-?

A

Motion of liquid molecules

B

Intermolecular forces between the molecules

C

Kinetic energy of the molecules

D

Mass of the molecules

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Q 43

In a homologous series, adjacent members differ by a _____ unit?

A

 CH_3

B

 CH_2

C

 CH

D

 CH_4

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Q 44

During S_N1 mechanism, nucleophile can attack on the halogen carbon?

A From opposite side of leaving group

B From front of leaving group

C From both sides

D None of these

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Q 45

Which of the following is an example of Nucleophile?

A

 Br^+

B

 CH_3^+

C

 NH_3

D

 CH_4

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Q 46

The compounds which have -CN group are called as_____?

A

Aldehydes

B

Imines

C

Amines

D

Nitriles

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Q 47

The four C-H bond of methane are formed by overlap of

A

 sp^3-s

B

 sp^2-s^2

C

 sp^3-s^2

D

 sp^3-sp^3

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Q 48

At equilibrium if the concentration of product is increased reaction will proceed to

A

Forward Direction

B

Backward Direction

C

Remain Undisturbed

D

None of these

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Q 49

Carbon is

A

trivalent

B

Tetravalent

C

Monovalent

D

Pentavalent

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Q 50

The conversion of n-hexane to benzene by heating is called:

A

Deformation

B

Rearrangement

C

Reformation

D

Aromatization

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Q 51

Which one of them have high melting point?

A

diamond

B

sulphur

C

ice

D

zinc

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Q 52

Unavailability of methods to find out heat of reactions accurately makes thermochemistry

A

Widely applicable in science

B

A Limited field of study

C

A Useful aspect of Industrial research

D

None of these

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Q 53

Order of reaction can be determined

A

Theoretically

B

Experimentally

C

Summing up the exponents of rate equation

D

All of these

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Q 54

During base catalyzed reactions, which property of nucleophile increases?

A

Basicity

B

Nucleophilicity

C

Electrophilicity

D

Both b and c

53

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Q 55

Calculate mass in grams of 8.694 moles of Ag_2CO_3

A

1417.53g

B

2399.544g

C

3456.78g

D

1231.98g

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Q 56

NAD contains which vitamin as cofactor.

A

B1

B

B2

C

C

D

B3

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Q 57

The inflammation of bronchi or bronchioles is known as

A

emphysema

B

asthma

C

pneumonia

D

bronchitis

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Q 58

What is the specialized organelle in muscle cells that serves to sequester calcium?

A

T-tubule

B

Sarcolemma

C

Sarcomere

D

Sarcoplasmic reticulum

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Q 59

Irreversible modifications require the synthesis of which of the following?

A

enzymes

B

carbohydrates

C

vitamins

D

proteins

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Q 60

Both radial and bilateral symmetry is found in which of the following phylum?

A

Protozoa

B

Porifera

C

Echinodermata

D

all of these

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Q 61

Air contains what percentage of carbon dioxide?

A

0.02-0.03

B

0.03-0.04

C

0.04-0.05

D

0.05-0.06

60

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Q 62

Human accumulated glycogen is an example of

A

phospholipid

B

polysacchrides

C

carbohydrates

D

both b and c

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Q 63

The first bacteria ever to be isolated is?

A

Coccus

B

Vibrio

C

Spirochete

D

Bacillus

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Q 64

The frequency of allele if it is evolutionary successful is?

A

increased

B

decreased

C

no change

D

none of these

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Q 65

In what year was the first person vaccinated by Edward Jenner?

A

1876

B

1796

C

1696

D

1850

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Q 66

Organisms that have one copy of each gene on each chromosome are?

A

diploid

B

haploid

C

unicellular

D

none of these

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Q 67

Garden snail belongs to which class of Mollusca?

A

Gastopoda

B

Cephalopoda

C

Myriapoda

D

None of them

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Q 68

The number of spermatids produced from primary spermatocytes is?

A

1

B

2

C

3

D

4

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Q 69

Mating between relatives is called which of the following?

A

ex breeding

B

breeding

C

inbreeding

D

outbreeding

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Q 70

Magnifying power of electron microscope as compared to eye is?

A

500 X

B

250 000 X

C

500 000 X

D

100 000 X

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Q 71

What are the subunits of Capsids?

A

Capsomeres

B

Flagella

C

Hyphae

D

Septa

70

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Q 72

Which statement is incorrect about ethylene production?

A

Climacteric is burst of respiratory activity in fruit ripening

B

It is associated with ethane production

C

It helps in fruit ripening

D

It helps in fruit set

71

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Q 73

Ribosomes combined with mRNA are called?

A

lysosome

B

nucleosome

C

polysome

D

polosome

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Q 74

In photosynthesis dark reaction, is called so because

A

It occurs in dark.

B

It does not require light energy.

C

It cannot occur during daytime.

D

It occurs more rapidly at night.

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Q 75

How many molecules of Carbon dioxide enter the calvin cycle to produce one molecule of carbohydrate?

A

2

B

3

C

4

D

1

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Q 76

Auxins are responsible for the promotion and growth of roots from?

A layering

B calluses

C cutting

D both a and b

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Q 77

A muscular passage that is common to both food and air is known as

A

bronchi

B

bronchioles

C

larynx

D

pharynx

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Q 78

The rate of reaction of enzyme directly depends upon which of the following?

A

Low temperature

B

Nature of substrate

C

Maximum pH level

D

Amount of enzyme present at a specific time at unlimited substrate concentration

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Q 79

The oxygen and carbon dioxide crosses the plasma membrane by the process of?

A

active diffusion

B

facilitated diffusion

C

passive diffusion

D

random diffusion

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Q 81

Which of the following is an exception to cell theory?

A

bacteria

B

viruses

C

protists

D

protozoans

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Q 79

The oxygen and carbon dioxide crosses the plasma membrane by the process of?

A

active diffusion

B

facilitated diffusion

C

passive diffusion

D

random diffusion

80

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Q 80

Who sent his theory to Darwin

A

Mendel

B

Wallace

C

Lamarck

D

Lynn Morgulis

80

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Q 81

Which of the following is an exception to cell theory?

A

bacteria

B

viruses

C

protists

D

protozoans

80

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Q 82

The trait "Kernel colour in corn" is controlled by how many pairs of genes?

A 1

B 2

C 3

D 4

81

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Q 83

What is the major cell infected by the AIDS HIV Virus?

A

B lymphocyte

B

T lymphocytes

C

Cancer cells

D

stem cells

82

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Q 84

The space inside the chest cavity during inspiration is:

A

decreased

B

increased

C

remains same

D

first increased then decreased

83

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Q 85

Which of these membrane is richest in protein?

A

nuclear membrane

B

inner mitochondrial membrane

C

endoplasmic reticulum

D

plasma membrane

84

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Q 86

According to Hardy-Weinberg theorem, frequencies of alleles and genotypes in a population's gene pool remain?

A

Mobile in gene pool

B

constant

C

Stationary in gene pool

D

Constant unless acted upon by agents other than sexual recombination

85

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Q 87

The largest part of the human brain is the

A

cerebrum

B

thalamus

C

hypothalamus

D

limbic system

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Q 88

Which of the following will not survive in the presence of oxygen?

A

Constitutive anaerobe

B

Facultative anaerobe

C

Constitutive aerobe

D

Obligate anaerobe

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Q 89

The structure of which bacteriophage resembles a tadpole?

A

T2

B

T4

C

Both

D

none

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Q 90

In reproduction, semen refers to which of the following?

A fluid and sperms

B blood and water

C blood and sperms

D blood and fluid

89

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Q 91

The mode of reproduction for cyanobacteria is which of the following?

A

mitosis

B

meiosis

C

binary fission

D

conjugation

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Q 92

What is the size range of Porifera?

A

Few centimeter wide to more than one meter tall

B

Few decimeter wide to more than one meter tall

C

One meter wide to more than millimeter tall.

D

Few millimeter wide to more than one meter tall

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Q 93

The shortest way by which impulses travel from the receptor to the effector is called?

A

synapse

B

reflex actin

C

reflex arc

D

voluntary response

92

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Q 94

To overcome infertility, which technique is used:

A

In vitro fertilization

B

In vivo fertilization

C

Both A and B

D

None of these

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Q 95

Glycogen is present in all body except

A

Brain

B

Heart

C

Blood

D

Tissues

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Q 96

The cause behind vomiting is:

A

peristalsis

B

anti peristalsis

C

swallowing

D

Hunger pangs

95

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Q 97

Myosin filaments are contained within each:

A

Sarcomere

B

microtubules

C

Filaments

D

M-line

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Q 98

Which of the following is true regarding balancing selection?

A An example is heterozygote advantage

B It maintains variation in a population

C It is the opposite of purifying selection

D all of these

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Q 99

During test cross, if all offsprings are phenotypically dominant then parents are?

A

Heterozygous

B

One homozygous other heterozygous

C

homozygous

D

none of these

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Q 100

Which of the following statements are true about a virion?

A

Lytic phage

B

Lysogenic phage

C

The viral capsid

D

An infectious and fully formed viral particle

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Q 101

What is utilized during sugar production in photosynthesis?

A

ATP

B

naDH

C

carbon dioxide

D

both a and b

100

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Q 102

The phenomenon in which the affect of one allele in heterozygous genotype completely masks the affect of other is called

A

codominance

B

dominance

C

incomplete dominance

D

complete dominance

101

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Q 103

An insulin molecule is made up of how many polypeptide chains?

A

4

B

2

C

3

D

1

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Q 104

Medulla, pons and cerebellum are found in which brain part?

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

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Q 105

What is the shape of the poliovirus?

A

rod

B

spherical

C

tadpole

D

helical

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Q 106

Most carbon dioxide is transported in the form of:

A Carboxyhemoglobin

B Plasma proteins

C Bicarbonate ions

D in dissolved form

105

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Q 107

The other names for skeletal muscles are:

A

Striped muscles

B

Striated muscles

C

Involuntary muscles

D

Both A and B are correct

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Q 108

Those bacteria which are fully dependent upon their host for nutrition are called?

A

Heterotrophic bacteria

B

Saprotrophic bacteria

C

Chemosynthetic bacteria

D

parasitic bacteria

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Q 109

A sponge of Antarctica which is more than a meter tall is known as?

A

Euplectella

B

Spongilla

C

Leucosolenia

D

Scolymastra joubini

108

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Q 110

How is the ATP molecule used by the cell?

A

synthesis of complex compounds

B

active transport

C

Muscular contraction

D

all of these

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Q 111 Cnidaria is characterized by which of the following?

A Tissue level of organization

B Nematoblasts

C Coelenteron

D all of these

110

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Q 112

Which factors may help determine the antigenicity of a virus?

A

capsomeres

B

size of virus

C

whole capsid

D

internal proteins

111

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Q 113

An inhibitor is added, disrupting the function of a particular enzyme. The experimenter adds more substrate, and enzyme function increases again. These results indicate the involvement of what type of inhibitor?

A Noncompetitive

B Uncompetitive

C Allosteric

D Competitive

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Q 114

Structures that were once functional in the past but no longer serve a purpose due to evolutionary adaptations and physiological changes are referred to as?

- A vestigial
- B analogous structures
- C homologous structures
- D none of these

113

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Q 115

What are the end products of the ETC in animals?

A

ATP

B

carbon dioxide

C

water

D

both a and c

114

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Q 116

An activated enzyme consisting of the polypeptide chain and co-factors is known as which of the following?

A apoenzyme

B holoenzyme

C coenzyme

D prosthetic group

115

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Q 117

How many types of gametes possible when $rrYy$ is present?

A

1

B

2

C

3

D

4

116

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Q 118

What is the approximate diameter of the peroxisome?

A

0.5 micrometer

B

1.5 micrometer

C

2 micrometer

D

1 micrometer

117

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 119 Ascaris is characterized by which of the following?

- A Presence of true coelom and metamerism
- B Presence of true coelom but the absence of metamerism
- C Absence of true coelom but the presence of metamerism
- D Absence of true coelom and metamerism

118

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Q 120

Where does fertilization typically take place in the female?

A

uterus

B

ovaries

C

eggs

D

fallopian tube

119

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 121 Uterus opens into the vagina through:

A uterus

B cervix

C oviduct (fallopian tube)

D ovary

120
SKIPPED QUESTIONS ^

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Q 122

The brain that coordinates skeletal muscle movements is:

A

thalamus

B

amygdala

C

hypothalamus

D

cerebellum

121

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Q 123

The bronchitis is of types?

A

2

B

3

C

4

D

5

122

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Next Question 

Q 124

The maximum capacity of 100 ml blood to absorb oxygen is:

A 10 ml

B 20 ml

C 30 ml

D 45 ml

123

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Q 125

What is the formula for Coulomb's law?

A

$$F = Kq_1q_2/r^2$$

B

$$F = 2Kq_1q_2/r^3$$

C

$$F = Kq_1/r$$

D

$$F = Kq_1/q_2$$

124

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Q 126

The magnitude of the displacement is:...

A

size of object A

B

straight line distance between the initial position and the final position of the body

C

size of object B

D

any distance between the initial position and the final position of the body

125

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Q 127

Who stated the Right hand Thumb Rule?

A

Oersted

B

Maxwell

C

Einstein

D

Flaming

126

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Q 128

One isotope of Uranium is U-238. Any other isotope of Uranium must have

A 146 protons

B 92 protons

C 92 neutrons

D 146 neutrons

127

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Q 129

A succession of events which bring the system back to its initial condition is called:....

A oscillation

B vibration

C cycle

D circle

128

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Q 130

In a half wave rectification,during negative cycle of the wave the diode is

A

reversed biased

B

forward biased

C

potential barrier

D

none of these

129

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 131

For a particular displacement how is the work done related to time

A

depend on time

B

independent of time

C

both of these

D

none of these

130

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Q 132

Magnetic flux is scalar product of

A

B and V

B

B and A

C

B and I

D

none of these

131

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Q 133

The direction associated with angular displacement is given by

A

Left hand rule

B

Head to tail rule

C

Right hand rule

D

none of these

132

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Q 134

When temperature of the system does not change, it is called:...

A

isothermal

B

adiabatic

C

isovolumetric

D

isobaric

133

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 135

In a stationary wave, the distance between adjacent nodes is equal to:

A λ

B 2λ

C $\lambda/2$

D $\lambda/4$

134

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Q 136

The number of vibrations executed in one second is called:

A

Period

B

Frequency

C

amplitude

D

wavelength

135

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 137

The reverse process of pair production is known as :

A

Annihilation of energy

B

Anti Pair production

C

materialization of matter

D

Annihilation of practical into its antiparticle

136

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Q 138

Two incandescent light bulbs of 40 W and 60 W ratings are connected in series across the mains. Then

A The bulbs together consume 100 W

B The bulbs together consume 50 W

C The 60 W bulb glows brighter

D The 40 W bulb glows brighter

137

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 139

A half wave rectifier is equivalent to

A

Clamper

B

Clipper

C

Clamper circuit with negative bias

D

Clamper circuit with positive bias

138

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 140

The number of revolutions in 3π radians is

A

2

B

 $3/2$

C

6

D

 $1/6$

139

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 141

The bridge rectifier is preferred to an ordinary two diode full wave rectifier because

A it needs much smaller transformer for the same output

B no center tap required

C less PIV rating per diode

D All of the above

140

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Q 142

The work done by the push of air on an object of mass 10 kg falling from rest through a vertical distance of 10 m is 500 J. Find the velocity of the object at the end of 10 m fall: ($g = 10 \text{ m/s}^2$)

A 20m/sec

B 12m/sec

C 5m/sec

D 10m/sec

141

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#)

Q 143

Average velocity of a object after a completing a circle of 5 m radius in 5 seconds

A

 2π

B

 π

C

zero

D

 10π

142

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#)

Q 144

The electron emitted in β – radiation originates from where?

A

inner orbits of atom

B

free electrons existing in nuclei

C

the decay of a neutron in a nuclei

D

photon escaping from a nuclei

143

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 145

Nucleus absorbs

A

x rays

B

beta rays

C

gamma rays

D

all of these

144

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 146

A man pulls a bucket of water from a h meter deep well, if mass of rope is m and mass of bucket with water is M , then work done by man is

A $(M/2 + m)gh$

B $(M + m)gh/2$

C $(M + m/2)gh$

D $(M + m)gh$

145

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 147

In a stationary wave, the phase angle between a node and a consecutive antinode is:

A 90 deg

B 180 deg

C 270 deg

D 150 deg

146

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 148

What will be the photon energy for a wavelength of 5000 angstroms, if the energy of a photon corresponding to a wavelength of 7000 angstroms is 4.23×10^{-19} J?

A 0.456 eV

B 5.879 eV

C 3.701 eV

D 1.6×10^{-19} eV

147

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 149

Which source is associated with a line emission spectra

A

Electric fibre

B

Neon street sign

C

Red traffic light

D

Sun

148

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 150

Calculate the frequency of photon associated with 500 nm wavelength

A

 5×10^{14} Hz

B

 6×10^{14} Hz

C

 7×10^{14} Hz

D

 9×10^{14} Hz

149

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 151

Consider a car is travelling for one hour. In which of the following cases the average velocity is zero?

A

car travels 20 km due east

B

car travels 60 km due east, then turns around and travels 40 km due west

C

car travels 70 km due east

D

car travels 30 km due west, then turns around and travels 30 km due east

150

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 152

An electric iron is marked 20 volts 500W. The units consumed by it in using it for 24 hours will be

A

12

B

24

C

5

D

1100

151

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Q 153

Woolen clothes keep the body warm because of

A

bad conductivity

B

good conductivity

C

low temperature

D

none of these

152

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 154

If a photon is absorbed by a electron the energy of electron

A

increase

B

decrease

C

remain same

D

another photon will be released by electron

153

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Q 155

Which of the following phenomenon proves that light waves are transverse waves?

A polarization

B refraction

C interference

D diffraction

154

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Q 156

An ambulance siren emits a sound of frequency 1800 Hz. The speed of sound in air is 330 m/s. The ambulance moves towards a stationary observer at a constant speed of 50 m/s. What is the frequency heard by the observer?

A

$$(1800 \times 290) / 330$$

B

$$(1800 \times 330) / 370$$

C

$$(1800 \times 330) / 280$$

D

$$(1800 \times 330) / 380$$

155

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Q 157

The forces of friction causes

A

excitations

B

de-excitations

C

magnetization

D

none of these

156

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 158

You have three capacitors, each of $3\ \mu\text{C}$. In which of the following combinations of the three capacitors, the resultant capacitance is $1\ \mu\text{C}$?

- A all three capacitors in series
- B two capacitors are in series, one in parallel
- C two capacitors are in parallel, one in series
- D all three capacitors in parallel

157

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#) 

Q 159

A cubic vessel of height 1 m is full of water, the minimum work done in taking water out

A 500 J

B 1000 J

C 5 J

D 10 J

158

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 160

Which statement is incorrect?

A

In a isobaric process $\Delta P=0$

B

In a isochoric process $\Delta W=0$

C

In a isothermal process $\Delta T=0$

D

In a isothermal process $\Delta Q=0$

159

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 161 Centre tape rectifier circuit consists of _____ diode

A 1

B 200%

C 300%

D 400%

SKIPPED QUESTIONS 

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Next Question 

Q 162

A negative point charge is moving along a circular orbit around a positive point charge. Which aspect(s) of the electric force on the negative point charge will remain constant as it moves?

A

direction

B

magnitude

C

both direction and magnitude

D

neither direction and magnitude

161

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#) 

Q 163

The relation between linear and angular acceleration is:

A

$$a = \alpha \times r$$

B

$$\alpha = a \times r v$$

C

$$v = a \times r$$

D

$$r = \alpha \times v$$

162

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 164

Resistance of a conductor depends upon

A

temperature

B

nature of a conductor

C

length

D

None of these

163

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Q 165

A car is moving in a circular track of radius 20m at a constant speed of 20m/sec. Find the centripetal acceleration?

A 20 m/s^2

B 40 m/s^2

C 30 m/s^2

D 10 m/s^2

164

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 166

The open-circuit test in a transformer is used to measure

A

Copper loss

B

winding loss

C

Total loss

D

core loss

165

SKIPPED QUESTIONS  Previous QuestionNext Question 

Q 167

The spin of quarks is

A

1

B

2

C

half

D

quarter

166

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Q 168

A park has an outdoor organ. When the air temperature increases, the fundamental frequency of one of the organ pipes:.....

A is impossible to determine

B stays the same

C decreases

D increases

167

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Q 169

Electric current may be defined as

A

Rate of flow of charge

B

Rate of flow of momentum

C

Rate of flow of power

D

None of them

168

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Q 170

Find the resistance if voltage of the circuit is 45 volts and current 30 Amp?

A 1.6 ohm

B 1.5 ohm

C 1.7 ohm

D 1.8 ohm

169

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Q 171

A sample of F-18 is used internally as a medical diagnostic tool to look for the effect of the positron decay ($T_{1/2} = 110$ min),. How long does it take for 99 % of the F-18 to decay?

A 10.2 h

B 11.2 h

C 14.2 h

D 12.2 h

170

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 172

For a car which applies brakes from 10 m/s to stop the car in 10 sec its acceleration is

A 1 m/s^2

B 2 m/s^2

C -1 m/s^2

D -2 m/s^2

171

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Q 173

If $^{238}\text{Pu}_{94}$ decay an alpha particle the new atomic number and mass number are

A 234,90

B 234,92

C 231,97

D none of these

172

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#)

Q 174

In a centre tap full wave rectifier if V_m is the peak voltage across the secondary of transformer, the maximum voltage across reverse bias is

A

 V_m

B

 $V_m/\sqrt{2}$

C

 $2V_m$

D

 $V_m/3$

173

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Q 175

A cyclist come to skidding stop in 10 m, the force on the cycle due to the road is 200 N and opposite to the motion. how much work does the road do on the cycle

A 2000 J

B -2000 J

C 0

D 200 J

174

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Q 176

What is the energy of a photon in a beam of infrared radiation of wavelength 1240 nm? Give your answer in eV.

A

1

B

 6.25×10^{18}

C

 1.6×10^{-19}

D

 3.6×10^6

175

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Q 177

What is the energy stored in a capacitor of capacitance $2\ \mu\text{F}$ and potential difference between the plates is 12V ?

A 12 J

B 24 J

C 6 J

D $\frac{1}{6}\text{ J}$

176

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Q 178

Energy stored in an inductor is

A

electric energy

B

magnetic energy

C

electromagnetic energy

D

both a) and b)

177

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Q 179 If angular velocity increases the _____ also increases

A time period

B frequency

C vibration

D none of these

178

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Q 180

If magnetic field is given by $B = (2\mathbf{i} + 3\mathbf{j} - 8\mathbf{k})$ and a loop of area 10 sq.m is placed in field in y-z plane, max flux will be

A -20 wb

B 30 wb

C 20 wb

D 80 wb

179

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Demonstrate correct use of articles and prepositions

Q 181 Gold is _____ precious metal.

A a

B an

C the

D no article

SKIPPED QUESTIONS ¹⁸⁰ ⬆

⬅ Previous Question

Next Question ➡

Demonstrate control of tenses and sentence structure

Q 182 Hurry up! Our train _____ at platform 3.

A waiting

B waits

C is waiting

D is waitting

181

SKIPPED QUESTIONS ^

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Next Question >

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 183

Choose the correct spelling of the word

A

fual

B

fuel

C

fule

D

fuil

182

SKIPPED QUESTIONS 

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Next Question 

Comprehend key vocabulary

Q 184

The weather is _____ today, unlike yesterday which was really rough and stormy.

A

dirty

B

sad

C

calm

D

lazy

183

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Comprehend key vocabulary

Q 185

The _____ in weather between the North and South of the country is noticable.

A

comparison

B

contrast

C

compare

D

juxtaposition

184

SKIPPED QUESTIONS [< Previous Question](#)[Next Question >](#)

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 186

Choose the correct spelling of the word

A

readey

B

raddy

C

reddy

D

ready

SKIPPED QUESTIONS



185

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Next Question >

Comprehend key vocabulary

Q 187

The _____ at the hospital told me not to worry about my arm anymore.

A

accountant

B

lodger

C

director

D

specialist

186

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Demonstrate control of tenses and sentence structure

Q 188

What tense is the verb in this sentence? 'The children are playing outside.'

A Present

B past

C future

D none of these

187

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Next Question >

Demonstrate control of tenses and sentence structure

Q 189

Which of the sentences is correct?

A

I usually getting the bus to work.

B

I usually gets the bus to work.

C

I am usually getting the bus to work.

D

I usually get the bus to work.

188

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Comprehend key vocabulary

Q 190

Rainfall in the desert is not only extremely low, but also extremely _____.

A

intense

B

erratic

C

meagre

D

undesirable

SKIPPED QUESTIONS



189

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Next Question >

Demonstrate correct use of articles and prepositions

Q 191 When Asad was a schoolboy, he was crazy _____ cars and kept drawing them in his notebooks.

A on

B of

C about

D under

SKIPPED QUESTIONS 

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Next Question 

Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 192

Choose the correct sentence.

A

Today was her sisters birthday so she took her out for dinner.

B

Today was her sister's birthday, so she took her out for dinner.

C

Today was her sister's birthday so she took her out for dinner.

D

Today was her Sister's birthday, so she took her out for dinner.

191

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Next Question 

Demonstrate correct use of subject-verb agreement

Q 193 A number of soldiers ____ injured during the war.

A is

B were

C was

D might

192

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Next Question >

Demonstrate correct use of subject-verb agreement

Q 194 Half of the class _____ empty.

A were

B was

C has

D have

193

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Next Question 

Demonstrate control of tenses and sentence structure

Q 195

The children _____ (join) hands to make a circle.

A joining

B joins

C joined

D had join

194

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Demonstrate control of tenses and sentence structure

Q 196

I _____ (take) the medicine as prescribed by the doctor for a week now.

A

take

B

would have taken

C

have been taking

D

have had been taking

195

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Demonstrate correct use of articles and prepositions Demonstrate correct use of subject-verb agreement
Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 197

The baby was obviously getting too hot, then Sam did what he could to cool her.

A

hot, then Sam did

B

hot, Sam did

C

hot; Sam, therefore, did

D

hot; Sam therefore trying to do

196

SKIPPED QUESTIONS [Previous Question](#)[Next Question](#) 

Demonstrate correct use of writing conventions of spelling, capitalization and punctuation to clarify meaning

Q 199

Choose the correct spelling of the word

A

comitte

B

commite

C

committee

D

comittee

198

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Next Question 

Demonstrate control of tenses and sentence structure

Q 200

Choose the correct tense: "He goes to school".

A Present

B Past

C Future

D None

SKIPPED QUESTIONS



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Next Question >

Fact Checking

Q 201

Fact 1 Ayesha said Hamza and I both have cats Fact 2 Hamza said I don't have a cat Fact 3 Ayesha always tells the truth but hamza sometimes lies If the above three statements are facts than which of the following statement will also be a fact I. Ayesha has a cat II. Hamza has a cat III. Hamza is lying IV. All the statements are the facts

A Only 1

B Only II

C Only III

D Statement 4

200

SKIPPED QUESTIONS [← Previous Question](#)[Next Question →](#)

Statements and Actions

Q 202

Statement The management of hospitals are getting worse day by day. The doctors are so confused and they don't even know how to tackle bunch of patients. I. Our Government should increase medical seats. So that we can get more doctor every year. In this case the stress on medical staff will increase as well. II. The Government should provide and develop strategies for medical staff and hospitals

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

201

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Verbal Classification

Q 203

The jug is full ____ juice?

A

of

B

about

C

by

D

Both A and B

SKIPPED QUESTIONS



202

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Next Question >

Analogies

Q 204

Gym is to exertion as consuming is to

A

Food

B

Dieting

C

Fitness

D

Eatery

203

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Statements and Actions

Q 205

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

204

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Complete the series

Q 206

Complete the series U32 V29 _____ X23 Y20

A

W26

B

W17

C

Z17

D

Z26

205

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Dependent Causes/ Independent Causes/

Q 207

I. It was raining cats and dogs after a week of heat wave in Karachi. II. The weather forecast predicts a pleasant weather for next week.

- A Statement I is the cause and statement II is its effect.
- B Statement II is the cause and statement I is its effect.
- C Both statements I and II are independent causes
- D Both statements I and II are the effects of independent cause.

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SKIPPED QUESTIONS ^

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Next Question >

Dependent Causes/ Independent Causes/

Q 208

Statement: The university authority has instructed all the colleges under its jurisdiction to ban use of all phones inside the college premises. Majority of the teachers of the colleges signed a joint petition to the university complaining the disturbances caused by cell phone ringtones inside the classrooms.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause

207

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Answer on Passage

Q 209

Four friends in the fifth grade were sharing a pizza. They decided that the oldest friend would get the extra piece. Zara is two months older than Mohib, who is three months younger than kiran. Minal is one month older than Mohib. Who should get the extra piece of pizza?

A

Zara

B

Mohib

C

Kiran

D

Minal

208

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Statement and Argument

Q 210

Statement Should the public sector undertakings be allowed to adopt a hire-and-fire policy? Arguments (I) Yes, as this will help the public sector undertakings to get rid of non-performing employees and will also help to reward the performing employees. (II) No, the management may not be able to implement the policy in an unbiased manner and the employees will suffer due to the high-handedness of the management.

A If only argument I is strong.

B If only argument II is strong

C If both I and II are strong.

D If neither I nor II is strong

209

SKIPPED QUESTIONS 

Q1 Which of the following gives Markovnikov's product with Propene?

A HBr

B $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$

C HBr

D All of these

< Previous Question

Next Question >

Q2

The smallest part of crystal lattice showing all the properties of a crystal is called as _____?

A

Crystallite

B

Unit cell

C

Unit crystal

D

Monomer

[< Previous Question](#)[Next Question >](#)

Q3

Which type of bonds are break during cracking?

A

C-C

B

C-H

C

Both C-C and C-H

D

C-O

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Q4 Which of the following is more soluble in water_____?

A Ethanol

B Phenol

C Hexanol

D Dimethyl ether

< Previous Question

Next Question >

Q5 The reactions that release heat are called as _____?

A Endothermic reactions

B Exothermic reactions

C Endergonic reactions

D Heat gaining reactions

< Previous Question

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Q6

Elements of group 7A are called

A

good loser

B

good gainer

C

energetic

D

stable

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Q7

Enzymes that catalyze hydrolysis:

A

Oxidoreductase

B

Hydrolases

C

Ligases

D

Transferases

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Q8

The slope of the curve obtained by plotting concentration change with time is actually

A

Reaction time

B

Reaction Speed

C

Rate of reaction

D

All of these

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Q9

Addition of second Electron to a uni-negative ion always_____?

A

An endothermic process

B

An exothermic process

C

Neutral process

D

Energy wasted

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Q10

The compounds having -COOH group are called as_____?

A

Aldehydes

B

Ketones

C

Carboxylic acids

D

Alcohols

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Q11

a photon of wavelength $1.27 \times 10^{-5} \text{ m}$ is emitted when it jump from higher to $n = 1$, what will be higher orbit

A

 $n = 2$

B

 $n = 3$

C

 $n = 4$

D

 $n = 5$

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Q12

An atom or group of atom that gives specific properties to the Compound is called as _____?

A

Functional groups

B

Homologous series

C

Alkane

D

Atoms

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Q13

Order of discharge of ions depends upon

A

Their temperature

B

Their concentration

C

Their Activation Energy

D

All of these

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Q14 Which of the following remains the same in a period

A nuclear charge

B number of electrons

C shielding effect

D ionization energy

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Q15

Crystals of $\text{Na}_2\text{CO}_3 \cdot 10\text{H}_2\text{O}$ when exposed to air

A

Lose water and remain solid

B

Gain water and remain solid

C

Gain water and become liquid

D

Remains unchanged

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Q16

Compounds having atoms of more than one kind are called as?

A

Homocyclic compounds

B

Alicyclic Compounds

C

Heterocyclic compounds

D

None of these

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Q17

Hydrocarbons are organic compounds with element _____

A

Hydrogen

B

Oxygen

C

Carbon

D

Both hydrogen and carbon

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Q18

The product of active masses of reactant is related to

A

Equilibrium constant

B

rate of reaction

C

Direction of reaction

D

Temperature of reaction

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Q19

The probability of finding an electron _____ even at large distances from the nucleus

A

becomes one

B

becomes zero

C

never becomes zero

D

varies from to 1

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Q20

In Metal Hydrides the Oxidation number of Hydrogen is

A

1

B

-1

C

zero

D

2

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Q21

Equilibrium curve can be drawn by plotting

A

Time and Speed

B

Temperature and Pressure

C

Time & Concentration

D

Pressure & Concentration

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Q22

The products of S_N1 reactions are formed with_____?

A

Retention in configuration

B

Inversion in Configuration

C

50% retention and 50% inversion in configuration

D

All of these

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Q23

Dalton's atomic theory couldn't explain the concept about

A

isomers

B

protons

C

isotopes

D

nucleus

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Q24

How acetic acid is commercially synthesized;

A

from acetylene hydrogenation

B

from oxidation of ethyl alcohol

C

from oxidation of benzaldehyde

D

all of these

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Q25

Which of the following is the correct IUPAC name of acetone?

A

Propanone

B

3-Propanone

C

2-Butanone

D

2-Propanone

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Q26

When does it mean, when a reaction is exothermic?

A

Energy content of product is more

B

Energy content of reactant is less

C

Heat is transferred from the system to surrounding

D

Heat is transferred from the Surrounding to the system

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Q27

All are aliphatic carboxylic acid except ?

A

Benzoic acid

B

Methanoic acid

C

Ethanoic acid

D

Acetic acid

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Q28

Planck's constant is defined as the ____ of energy and frequency of a photon.

A

product

B

sum

C

ratio

D

none of these

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Q29

What is optimum temperature for the process of fermentation?

A

10-15 degrees

B

25-30 degrees

C

25-35 degrees

D

25-40 degrees

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Q30

25 cm³ of the sample of H₂ gas effuses four times as rapidly as 25 cm³ of an unknown gas what will be the molar mass of unknown gas?

A

16g mol⁻¹

B

32g mol⁻¹

C

72g mol⁻¹

D

48 gmol⁻¹

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Q31

The most abundant elements in earth's crust are

A

B & Al

B

Ca & Mg

C

Si & Al

D

All

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Q32

Energy in formation of a crystal lattice is

A

Absorbed

B

Released

C

Dependent on Crystal Size

D

None of these

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Q33

What is the mass of one mole aspartame having formula $C_{14}H_{18}N_2O_5$

A

4g

B

40g

C

50g

D

1g

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Q34

The size and shape of a crystal depends upon some crystallographic elements which are

A

3

B

4

C

6

D

8

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Q35

Ethanol react which of the following reagent to form ethyl alcohol?

A

 $\text{H}_2\text{SO}_4/\text{H}_2\text{O}$

B

 NaOH

C

 PCl_3

D

All of these

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Q36

Melting and boiling point of liquids depend upon ____-?

A

Motion of liquid molecules

B

Intermolecular forces between the molecules

C

Kinetic energy of the molecules

D

Mass of the molecules

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Q37

In a homologous series, adjacent members differ by a _____ unit?

A

 CH_3

B

 CH_2

C

 CH

D

 CH_4

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Q38

Which of the following is an example of Nucleophile?

A

 Br^+

B

 CH_3^+

C

 NH_3

D

 CH_4

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Q39

The compounds which have -CN group are called as_____?

A

Aldehydes

B

Imines

C

Amines

D

Nitriles

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Q40

The four C-H bond of methane are formed by overlap of

A

sp^3-s

B

sp^2-s^2

C

sp^3-s^2

D

sp^3-sp^3

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Q41

At equilibrium if the concentration of product is increased reaction will proceed to

A

Forward Direction

B

Backward Direction

C

Remain Undisturbed

D

None of these

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Q42

Carbon is

A

trivalent

B

Tetravalent

C

Monovalent

D

Pentavalent

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Q43

The conversion of n-hexane to benzene by heating is called:

A

Deformation

B

Rearrangement

C

Reformation

D

Aromatization

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Q44

Which one of them have high melting point?

A

diamond

B

sulphur

C

ice

D

zinc

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Q45

Order of reaction can be determined

A

Theoretically

B

Experimentally

C

Summing up the exponents of rate equation

D

All of these

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Q46

During base catalyzed reactions, which property of nucleophile increases?

A

Basicity

B

Nucleophilicity

C

Electrophilicity

D

Both b and c

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Q47

Calculate mass in grams of 8.694 moles of Ag_2CO_3

A

1417.53g

B

2399.544g

C

3456.78g

D

1231.98g

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Q48

NAD contains which vitamin as cofactor.

A

B1

B

B2

C

C

D

B3

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Q49

The inflammation of bronchi or bronchioles is known as

A

emphysema

B

asthma

C

pneumonia

D

bronchitis

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Q50

What is the specialized organelle in muscle cells that serves to sequester calcium?

A

T-tubule

B

Sarcolemma

C

Sarcomere

D

Sarcoplasmic reticulum

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Q51

Irreversible modifications require the synthesis of which of the following?

A

enzymes

B

carbohydrates

C

vitamins

D

proteins

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Q52

Both radial and bilateral symmetry is found in which of the following phylum?

A

Protozoa

B

Porifera

C

Echinodermata

D

all of these

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Q53

Human accumulated glycogen is an example of

A

phospholipid

B

polysacchrides

C

carbohydrates

D

both b and c

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Q54

The first bacteria ever to be isolated is?

A

Coccus

B

Vibrio

C

Spirochete

D

Bacillus

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Q55

The frequency of allele if it is evolutionary successful is?

A

increased

B

decreased

C

no change

D

none of these

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Q56

In what year was the first person vaccinated by Edward Jenner?

A

1876

B

1796

C

1696

D

1850

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Q57

Organisms that have one copy of each gene on each chromosome are?

A

diploid

B

haploid

C

unicellular

D

none of these

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Q58

Garden snail belongs to which class of Mollusca?

A

Gastropoda

B

Cephalopoda

C

Myriapoda

D

None of them

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Q59

The number of spermatids produced from primary spermatocytes is?

A

1

B

2

C

3

D

4

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Q60

Magnifying power of electron microscope as compared to eye is?

A

500 X

B

250 000 X

C

500 000 X

D

100 000 X

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Q61

What are the subunits of Capsids?

A

Capsomeres

B

Flagella

C

Hyphae

D

Septa

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Q62

Which statement is incorrect about ethylene production?

A

Climacteric is burst of respiratory activity in fruit ripening

B

It is associated with ethane production

C

It helps in fruit ripening

D

It helps in fruit set

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Q63

Ribosomes combined with mRNA are called?

A

lysosome

B

nucleosome

C

polysome

D

polosome

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Q64

The mechanism of reaction can be understood by

A

Experimental details

B

Balanced chemical equation

C

Molar Ratio

D

All of these

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Q65

The condition of a system is called as ____?

A

Reaction conditions

B

Concentration

C

State of system

D

All of these

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Q66

Mating between relatives is called which of the following?

A

ex breeding

B

breeding

C

inbreeding

D

outbreeding

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Q67

The structure of which bacteriophage resembles a tadpole?

A

T2

B

T4

C

Both

D

none

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Q68

Myosin filaments are contained within each:

A

Sarcomere

B

microtubules

C

Filaments

D

M-line

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Q69

The brain that coordinates skeletal muscle movements is:

A

thalamus

B

amygdala

C

hypothalamus

D

cerebellum

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Q70

An ambulance siren emits a sound of frequency 1800 Hz. The speed of sound in air is 330 m/s. The ambulance moves towards a stationary observer at a constant speed of 50 m/s. What is the frequency heard by the observer?

A

$$(1800 \times 290) / 330$$

B

$$(1800 \times 330) / 370$$

C

$$(1800 \times 330) / 280$$

D

$$(1800 \times 330) / 380$$

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Q71

How many molecules of Carbon dioxide enter the calvin cycle to produce one molecule of carbohydrate?

A

2

B

3

C

4

D

1

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Q72

Auxins are responsible for the promotion and growth of roots from?

A

layering

B

calluses

C

cutting

D

both a and b

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Q73

A muscular passage that is common to both food and air is known as

A

bronchi

B

bronchioles

C

larynx

D

pharynx

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Q74

The rate of reaction of enzyme directly depends upon which of the following?

A

Low temperature

B

Nature of substrate

C

Maximum pH level

D

Amount of enzyme present at a specific time at unlimited substrate concentration

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Q75

The oxygen and carbon dioxide crosses the plasma membrane by the process of?

A

active diffusion

B

facilitated diffusion

C

passive diffusion

D

random diffusion

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Q76

Who sent his theory to Darwin

A

Mendel

B

Wallace

C

Lamarck

D

Lynn Morgulis

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Q77

The trait "Kernel colour in corn" is controlled by how many pairs of genes?

A

1

B

2

C

3

D

4

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Q78

What is the major cell infected by the AIDS HIV Virus?

A

B lymphocyte

B

T lymphocytes

C

Cancer cells

D

stem cells

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Q79

The space inside the chest cavity during inspiration is:

A

decreased

B

increased

C

remains same

D

first increased then decreased

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Q80

Which of these membrane is richest in protein?

A

nuclear membrane

B

inner mitochondrial membrane

C

endoplasmic reticulum

D

plasma membrane

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Q81

According to Hardy-Weinberg theorem, frequencies of alleles and genotypes in a population's gene pool remain?

A

Mobile in gene pool

B

constant

C

Stationary in gene pool

D

Constant unless acted upon by agents other than sexual recombination

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Q82

The largest part of the human brain is the

A

cerebrum

B

thalamus

C

hypothalamus

D

limbic system

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Q83

Which of the following will not survive in the presence of oxygen?

A

Constitutive anaerobe

B

Facultative anaerobe

C

Constitutive aerobe

D

Obligate anaerobe

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Q84

In reproduction, semen refers to which of the following?

A

fluid and sperms

B

blood and water

C

blood and sperms

D

blood and fluid

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Q85

The mode of reproduction for cyanobacteria is which of the following?

A

mitosis

B

meiosis

C

binary fission

D

conjugation

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Q86

What is the size range of Porifera?

A

Few centimeter wide to more than one meter tall

B

Few decimeter wide to more than one meter tall

C

One meter wide to more than millimeter tall.

D

Few millimeter wide to more than one meter tall

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Q87

The shortest way by which impulses travel from the receptor to the effector is called?

A

synapse

B

reflex actin

C

reflex arc

D

voluntary response

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Q88

To overcome infertility, which technique is used:

A

In vitro fertilization

B

In vivo fertilization

C

Both A and B

D

None of these

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Q89

Glycogen is present in all body except

A

Brain

B

Heart

C

Blood

D

Tissues

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Q90

The cause behind vomiting is:

A

peristalsis

B

anti peristalsis

C

swallowing

D

Hunger pangs

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Q91

Which of the following is true regarding balancing selection?

A

An example is heterozygote advantage

B

It maintains variation in a population

C

It is the opposite of purifying selection

D

all of these

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Q92

During test cross, if all offsprings are phenotypically dominant then parents are?

A

Heterozygous

B

One homozygous other heterozygous

C

homozygous

D

none of these

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Q93

Which of the following statements are true about a virion?

A

Lytic phage

B

Lysogenic phage

C

The viral capsid

D

An infectious and fully formed viral particle

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Q94

What is utilized during sugar production in photosynthesis?

A

ATP

B

naDH

C

carbon dioxide

D

both a and b

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Q95

The phenomenon in which the affect of one allele in heterozygous genotype completely masks the affect of other is called

A

codominance

B

dominance

C

incomplete dominance

D

complete dominance

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Q96

An insulin molecule is made up of how many polypeptide chains?

A

4

B

2

C

3

D

1

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Q97

Medulla, pons and cerebellum are found in which brain part?

A

Corpus callosum

B

Hindbrain

C

Forebrain

D

Midbrain

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Q98

What is the shape of the poliovirus?

A

rod

B

spherical

C

tadpole

D

helical

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Q99

The other names for skeletal muscles are:

A

Striped muscles

B

Striated muscles

C

Involuntary muscles

D

Both A and B are correct

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Q100

Those bacteria which are fully dependent upon their host for nutrition are called?

A

Heterotrophic bacteria

B

Saprotrophic bacteria

C

Chemosynthetic bacteria

D

parasitic bacteria

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Q101

A sponge of Antarctica which is more than a meter tall is known as?

A

Euplectella

B

Spongilla

C

Leucosolenia

D

Scolymastra joubini

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Q102

How is the ATP molecule used by the cell?

A

synthesis of complex compounds

B

active transport

C

Muscular contraction

D

all of these

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Q103 Cnidaria is characterized by which of the following?

A Tissue level of organization

B Nematoblasts

C Coelenteron

D all of these

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Q104

Which factors may help determine the antigenicity of a virus?

A

capsomeres

B

size of virus

C

whole capsid

D

internal proteins

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Q105

An inhibitor is added, disrupting the function of a particular enzyme. The experimenter adds more substrate, and enzyme function increases again. These results indicate the involvement of what type of inhibitor?

A

Noncompetitive

B

Uncompetitive

C

Allosteric

D

Competitive

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Q106 What are the end products of the ETC in animals?

- A ATP
- B carbon dioxide
- C water
- D both a and c

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Q107

An activated enzyme consisting of the polypeptide chain and co-factors is known as which of the following?

A

apoenzyme

B

holoenzyme

C

coenzyme

D

prosthetic group

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Q108

How many types of gametes possible when $rrYy$ is present?

A

1

B

2

C

3

D

4

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Q109

What is the approximate diameter of the peroxisome?

A

0.5 micrometer

B

1.5 micrometer

C

2 micrometer

D

1 micrometer

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Q110 Ascaris is characterized by which of the following?

- A Presence of true coelom and metamerism
- B Presence of true coelom but the absence of metamerism
- C Absence of true coelom but the presence of metamerism
- D Absence of true coelom and metamerism

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Q111 Where does fertilization typically take place in the female?

A uterus

B ovaries

C eggs

D fallopian tube

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Q112 Uterus opens into the vagina through:

A uterus

B cervix

C oviduct (fallopian tube)

D ovary

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Q113

The bronchitis is of types?

A

2

B

3

C

4

D

5

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Q114

The maximum capacity of 100 ml blood to absorb oxygen is:

A

10 ml

B

20 ml

C

30 ml

D

45 ml

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Q115

What is the formula for Coulomb's law?

A

$$F = Kq_1q_2/r^2$$

B

$$F = 2Kq_1q_2/r^3$$

C

$$F = Kq_1/r$$

D

$$F = Kq_1/q_2$$

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Q116

The magnitude of the displacement is:...

A

size of object A

B

straight line distance between the initial position and the final position of the body

C

size of object B

D

any distance between the initial position and the final position of the body

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Q117

Who stated the Right hand Thumb Rule?

A

Oersted

B

Maxwell

C

Einstein

D

Flaming

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Q118

One isotope of Uranium is U-238. Any other isotope of Uranium must have

A

146 protons

B

92 protons

C

92 neutrons

D

146 neutrons

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Q119

A succession of events which bring the system back to its initial condition is called:....

A

oscillation

B

vibration

C

cycle

D

circle

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Q120

In a half wave rectification,during negative cycle of the wave the diode is

A

reversed biased

B

forward biased

C

potential barrier

D

none of these

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Q121

Magnetic flux is scalar product of

A

B and V

B

B and A

C

B and I

D

none of these

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Q122

The direction associated with angular displacement is given by

A

Left hand rule

B

Head to tail rule

C

Right hand rule

D

none of these

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Q123

When temperature of the system does not change, it is called:...

A

isothermal

B

adiabatic

C

isovolumetric

D

isobaric

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Q124

In a stationary wave, the distance between adjacent nodes is equal to:

A

 λ

B

 2λ

C

 $\lambda/2$

D

 $\lambda/4$

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Q125

The number of vibrations executed in one second is called:

A

Period

B

Frequency

C

amplitude

D

wavelength

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Q126

The reverse process of pair production is known as :

A

Annihilation of energy

B

Anti Pair production

C

materialization of matter

D

Annihilation of practical into its antiparticle

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Q127

Two incandescent light bulbs of 40 W and 60 W ratings are connected in series across the mains. Then

A

The bulbs together consume 100 W

B

The bulbs together consume 50 W

C

The 60 W bulb glows brighter

D

The 40 W bulb glows brighter

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Q128

The number of revolutions in 3π radians is

A

2

B

 $3/2$

C

6

D

 $1/6$

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Q129

The bridge rectifier is preferred to an ordinary two diode full wave rectifier because

A

it needs much smaller transformer for the same output

B

no center tap required

C

less PIV rating per diode

D

All of the above

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Q130

The work done by the push of air on an object of mass 10 kg falling from rest through a vertical distance of 10 m is 500 J. Find the velocity of the object at the end of 10 m fall: ($g = 10 \text{ m/s}^2$)

A

20m/sec

B

12m/sec

C

5m/sec

D

10m/sec

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Q131

Average velocity of a object after a completing a circle of 5 m radius in 5 seconds

A

 2π

B

 π

C

zero

D

 10π

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Q132

The electron emitted in β – radiation originates from where?

A

inner orbits of atom

B

free electrons existing in nuclei

C

the decay of a neutron in a nuclei

D

photon escaping from a nuclei

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Q133

Nucleus absorbs

A

x rays

B

beta rays

C

gamma rays

D

all of these

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Q134

A man pulls a bucket of water from a h meter deep well, if mass of rope is m and mass of bucket with water is M , then work one by man is

A

$$(M/2 + m)gh$$

B

$$(M + m)gh/2$$

C

$$(M + m/2)gh$$

D

$$(M + m)gh$$

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Q135

What will be the photon energy for a wavelength of 5000 angstroms, if the energy of a photon corresponding to a wavelength of 7000 angstroms is 4.23×10^{-19} J?

A

0.456 eV

B

5.879 eV

C

3.701 eV

D

 1.6×10^{-19} eV

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Q136

Which source is associated with a line emission spectra

A

Electric fibre

B

Neon street sign

C

Red traffic light

D

Sun

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Q137

Calculate the frequency of photon associated with 500 nm wavelength

A

 5×10^{14} Hz

B

 6×10^{14} Hz

C

 7×10^{14} Hz

D

 9×10^{14} Hz

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Q138

Consider a car is travelling for one hour. In which of the following cases the average velocity is zero?

A

car travels 20 km due east

B

car travels 60 km due east, then turns around and travels 40 km due west

C

car travels 70 km due east

D

car travels 30 km due west, then turns around and travels 30 km due east

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Q139

An electric iron is marked 20 volts 500W. The units consumed by it in using it for 24 hours will be

A

12

B

24

C

5

D

1100

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Q140

Woolen clothes keep the body warm because of

A

bad conductivity

B

good conductivity

C

low temperature

D

none of these

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Q141

If a photon is absorbed by a electron the energy of electron

A

increase

B

decrease

C

remain same

D

another photon will be released by electron

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Q142

Which of the following phenomenon proves that light waves are transverse waves?

A

polarization

B

refraction

C

interference

D

diffraction

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Q143

The forces of friction causes

A

excitations

B

de-excitations

C

magnetization

D

none of these

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Q144

You have three capacitors, each of $3\ \mu\text{C}$. In which of the following combinations of the three capacitors, the resultant capacitance is $1\ \mu\text{C}$?

A

all three capacitors in series

B

two capacitors are in series, one in parallel

C

two capacitors are in parallel, one in series

D

all three capacitors in parallel

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Q145

A cubic vessel of height 1 m is full of water, the minimum work done in taking water out

A

500 J

B

1000 J

C

5 J

D

10 J

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Q146

Which statement is incorrect?

A

In a isobaric process $\Delta P=0$

B

In a isochoric process $\Delta W=0$

C

In a isothermal process $\Delta T=0$

D

In a isothermal process $\Delta Q=0$

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Q147 Centre tape rectifier circuit consists of _____ diode

A 1

B 200%

C 300%

D 400%

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Q148

Which one of the following is correct molecular mass of protein ?

A

9000

B

Less than 10000

C

10000

D

More than 10000

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Q148

Which one of the following is correct molecular mass of protein ?

A

9000

B

Less than 10000

C

10000

D

More than 10000

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Q149

For a particular displacement how is the work done related to time

A

depend on time

B

independent of time

C

both of these

D

none of these

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Q150

A negative point charge is moving along a circular orbit around a positive point charge. Which aspect(s) of the electric force on the negative point charge will remain constant as it moves?

A

direction

B

magnitude

C

both direction and magnitude

D

neither direction and magnitude

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Q151

The relation between linear and angular acceleration is:

A

$$a = \alpha \times r$$

B

$$\alpha = a \times r v$$

C

$$v = a \times r$$

D

$$r = \alpha \times v$$

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Q152

Resistance of a conductor depends upon

A

temperature

B

nature of a conductor

C

length

D

None of these

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Q153

A car is moving in a circular track of radius 20m at a constant speed of 20m/sec. Find the centripetal acceleration?

A

 20 m/s^2

B

 40 m/s^2

C

 30 m/s^2

D

 10 m/s^2

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Q154

The open-circuit test in a transformer is used to measure

A

Copper loss

B

winding loss

C

Total loss

D

core loss

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Q155

The spin of quarks is

A

1

B

2

C

half

D

quarter

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Q156

A park has an outdoor organ. When the air temperature increases, the fundamental frequency of one of the organ pipes:....

A

is impossible to determine

B

stays the same

C

decreases

D

increases

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Q157

Electric current may be defined as

A

Rate of flow of charge

B

Rate of flow of momentum

C

Rate of flow of power

D

None of them

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Q158

Find the resistance if voltage of the circuit is 45 volts and current 30 Amp?

A

1.6 ohm

B

1.5 ohm

C

1.7 ohm

D

1.8 ohm

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Q159

A sample of F-18 is used internally as a medical diagnostic tool to look for the effect of the positron decay ($T_{1/2} = 110$ min),. How long does it take for 99 % of the F-18 to decay?

A

10.2 h

B

11.2 h

C

14.2 h

D

12.2 h

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Q160

For a car which applies brakes from 10 m/s to stop the car in 10 sec its acceleration is

A

 1 m/s^2

B

 2 m/s^2

C

 -1 m/s^2

D

 -2 m/s^2

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Q161 If $^{238}_{94}\text{Pu}$ decay an alpha particle the new atomic number and mass number are

A 234,90

B 234,92

C 231,97

D none of these

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Q162

In a centre tap full wave rectifier if V_m is the peak voltage across the secondary of transformer, the maximum voltage across reverse bias is

A

 V_m

B

 $V_m/\sqrt{2}$

C

 $2V_m$

D

 $V_m/3$

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Q163

A cyclist come to skidding stop in 10 m, the force on the cycle due to the road is 200 N and opposite to the motion. how much work does the road do on the cycle

A

2000 J

B

-2000 J

C

0

D

200 J

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Q164

What is the energy of a photon in a beam of infrared radiation of wavelength 1240 nm? Give your answer in eV.

A

1

B

 6.25×10^{18}

C

 1.6×10^{-19}

D

 3.6×10^6

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Q165

What is the energy stored in a capacitor of capacitance $2\ \mu\text{F}$ and potential difference between the plates is 12V ?

A

12 J

B

24 J

C

6 J

D

 $1/6\ \text{J}$

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Q166

Energy stored in an inductor is

A

electric energy

B

magnetic energy

C

electromagnetic energy

D

both a) and b)

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Q167 If angular velocity increases the _____ also increases

A time period

B frequency

C vibration

D none of these

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Q168

If magnetic field is given by $B = (2i + 3j - 8k)$ and a loop of area 10 sq.m is placed in field in y-z plane, max flux will be

A

-20 wb

B

30 wb

C

20 wb

D

80 wb

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Q169

Gold is _____precious metal.

A

a

B

an

C

the

D

no article

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Q170

Hurry up! Our train _____ at platform 3.

A

waiting

B

waits

C

is waiting

D

is waitting

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Q171

Choose the correct spelling of the word

A

fual

B

fuel

C

fule

D

fuil

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Q172

The weather is _____ today, unlike yesterday which was really rough and stormy.

A

dirty

B

sad

C

calm

D

lazy

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Q173

The _____ in weather between the North and South of the country is noticeable.

A

comparison

B

contrast

C

compare

D

juxtaposition

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Q174

Choose the correct spelling of the word

A

readey

B

raddy

C

reddy

D

ready

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Q175

The _____ at the hospital told me not to worry about my arm anymore.

A

accountant

B

lodger

C

director

D

specialist

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Q176

What tense is the verb in this sentence? 'The children are playing outside.'

A

Present

B

past

C

future

D

none of these

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Q177

Which of the sentences is correct?

A

I usually getting the bus to work.

B

I usually gets the bus to work.

C

I am usually getting the bus to work.

D

I usually get the bus to work.

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Q178

Rainfall in the desert is not only extremely low, but also extremely _____.

A

intense

B

erratic

C

meagre

D

undesirable

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Q179

When Asad was a schoolboy, he was crazy _____ cars and kept drawing them in his notebooks.

A

on

B

of

C

about

D

under

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Q180

Choose the correct sentence.

A

Today was her sisters birthday so she took her out for dinner.

B

Today was her sister's birthday, so she took her out for dinner.

C

Today was her sister's birthday so she took her out for dinner.

D

Today was her Sister's birthday, so she took her out for dinner.

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Q181 Half of the class _____ empty.

A were

B was

C has

D have

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Q182 The children _____ (join) hands to make a circle.

A joining

B joins

C joined

D had join

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Q183

I _____ (take) the medicine as prescribed by the doctor for a week now.

A

take

B

would have taken

C

have been taking

D

have had been taking

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Q184

The baby was obviously getting too hot, then Sam did what he could to cool her.

A

hot, then Sam did

B

hot, Sam did

C

hot; Sam, therefore, did

D

hot; Sam therefore trying to do

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Q185

Choose the correct sentence.

A

When Sheila arrived she said, "please fix me some hot tea; i'm so cold!"

B

When Sheila arrived she said, "Please fix me some hot tea; Im so cold!"

C

When Sheila arrived she said, "Please fix me some hot tea, I'm so cold!"

D

When Sheila arrived she said, "Please fix me some hot tea; I'm so cold!"

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Q186

Choose the correct spelling of the word

A

comitte

B

commite

C

committee

D

comittee

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Q187

Choose the correct tense: "He goes to school".

A

Present

B

Past

C

Future

D

None

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Q188

Fact 1 Ayesha said Hamza and I both have cats Fact 2 Hamza said I don't have a cat Fact 3 Ayesha always tells the truth but hamza sometimes lies If the above three statements are facts than which of the following statement will also be a fact I. Ayesha has a cat II. Hamza has a cat III. Hamza is lying IV. All the statements are the facts

A Only 1

B Only II

C Only III

D Statement 4

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Q188

Fact 1 Ayesha said Hamza and I both have cats Fact 2 Hamza said I don't have a cat Fact 3 Ayesha always tells the truth but hamza sometimes lies If the above three statements are facts than which of the following statement will also be a fact I. Ayesha has a cat II. Hamza has a cat III. Hamza is lying IV. All the statements are the facts

A Only 1

B Only II

C Only III

D Statement 4

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Q189

The jug is full ____ juice?

A

of

B

about

C

by

D

Both A and B

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Q190

Gym is to exertion as consuming is to

A

Food

B

Dieting

C

Fitness

D

Eatery

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Q191

Statement The availability of imported fruits has increased in the indigenous market and so the demand for indigenous fruits has been decreased. I. To help the indigenous producers of fruits, the Government should impose high import duty on these fruits, even if these are not of good quality. II. The fruit vendors should stop selling imported fruits. So that the demand for indigenous fruits would be increased.

A Both of them follows

B None of them follows

C Only I follows

D Only II follows

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Q192

Complete the series U32 V29 _____ X23 Y20

A

W26

B

W17

C

Z17

D

Z26

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Q193

I. It was raining cats and dogs after a week of heat wave in Karachi. II. The weather forecast predicts a pleasant weather for next week.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect.

C

Both statements I and II are independent causes

D

Both statements I and II are the effects of independent cause.

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Q194

Statement: The university authority has instructed all the colleges under its jurisdiction to ban use of all phones inside the college premises. Majority of the teachers of the colleges signed a joint petition to the university complaining the disturbances caused by cell phone ringtones inside the classrooms.

A

Statement I is the cause and statement II is its effect.

B

Statement II is the cause and statement I is its effect

C

Both the statements I and II are independent causes

D

Both the statements I and II are effects of some common cause

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Q195

Four friends in the fifth grade were sharing a pizza. They decided that the oldest friend would get the extra piece. Zara is two months older than Mohib, who is three months younger than kiran. Minal is one month older than Mohib. Who should get the extra piece of pizza?

A

Zara

B

Mohib

C

Kiran

D

Minal

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Q196

Molecules of ____ can collide among themselves and exchange energy

A

solids

B

liquids

C

gases

D

both B & C

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Q197 Why transition metals have strong metallic bonding?

- A Because of high melting point
- B Because d-electrons of outer shell take part in bonding
- C Because s-electrons of outer shell take part in bonding
- D Both s and d electrons takes part in bonding

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Q198

When a liquid is heated in a closed container, equilibrium is established between ?

A

Liquid and Solid

B

Liquid and Vapour

C

Liquid solid and vapour

D

Liquid and vapour solid

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Q199

Air contains what percentage of carbon dioxide?

A

0.02-0.03

B

0.03-0.04

C

0.04-0.05

D

0.05-0.06

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Q200

During S_N1 mechanism, nucleophile can attack on the halogen carbon?

A

From opposite side of leaving group

B

From front of leaving group

C

From both sides

D

None of these

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Q201

Unavailability of methods to find out heat of reactions accurately makes thermochemistry

A

Widely applicable in science

B

A Limited field of study

C

A Useful aspect of Industrial research

D

None of these

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Q202

In photosynthesis dark reaction, is called so because

A

It occurs in dark.

B

It does not require light energy.

C

It cannot occur during daytime.

D

It occurs more rapidly at night.

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Q203

Which of the following is an exception to cell theory?

A

bacteria

B

viruses

C

protists

D

protozoans

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Q204

Most carbon dioxide is transported in the form of:

A

Carboxyhemoglobin

B

Plasma proteins

C

Bicarbonate ions

D

in dissolved form

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Q205

In a stationary wave, the phase angle between a node and a consecutive antinode is:

A

90 deg

B

180 deg

C

270 deg

D

150 deg

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Q206

A half wave rectifier is equivalent to

A

Clamper

B

Clipper

C

Clamper circuit with negative bias

D

Clamper circuit with positive bias

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Q207

Statement Should the public sector undertakings be allowed to adopt a hire-and-fire policy? Arguments (I) Yes, as this will help the public sector undertakings to get rid of non-performing employees and will also help to reward the performing employees. (II) No, the management may not be able to implement the policy in an unbiased manner and the employees will suffer due to the high-handedness of the management.

A

If only argument I is strong.

B

If only argument II is strong

C

If both I and II are strong.

D

If neither I nor II is strong

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Q207

Statement Should the public sector undertakings be allowed to adopt a hire-and-fire policy? Arguments (I) Yes, as this will help the public sector undertakings to get rid of non-performing employees and will also help to reward the performing employees. (II) No, the management may not be able to implement the policy in an unbiased manner and the employees will suffer due to the high-handedness of the management.

A

If only argument I is strong.

B

If only argument II is strong

C

If both I and II are strong.

D

If neither I nor II is strong

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Q208

A number of soldiers ____ injured during the war.

A

is

B

were

C

was

D

might

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Q209

Structures that were once functional in the past but no longer serve a purpose due to evolutionary adaptations and physiological changes are referred to as?

A

vestigial

B

analogous structures

C

homologous structures

D

none of these

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Q210

Statement The management of hospitals are getting worse day by day. The doctors are so confused and they don't even know how to tackle bunch of patients. I. Our Government should increase medical seats. So that we can get more doctor every year. In this case the stress on medical staff will increase as well. II. The Government should provide and develop strategies for medical staff and hospitals

A

Both of them follows

B

None of them follows

C

Only I follows

D

Only II follows

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